List of Claims:

1. (currently amended) A modem comprising at least one physical channel for transmitting data from a source to a receiver, said physical channel having a first logical channel and a second logical channel, wherein:

said first logical channel is configured to transmit only command information from the source to the modem for controlling telephone line operations of the modem, said first logical channel being defined by a command type in said command information, wherein said command information for controlling telephone line operations of the modem includes a command to call a telephone number or a command to answer an incoming call; and

said second logical channel is configured to transmit data information from the source to the receiver through the modem, said second logical channel being defined by a data type in said data information.

4. (currently amended) A communication method for use by a modem, said method comprising the steps of:

receiving data information via a first logical channel, said first logical channel being defined by a data type in said data information;

receiving command information via a second logical channel, said second logical channel being defined by a command type in said command information, wherein said first and second logical channels are a part of a single physical channel;

transferring said data information received via said first logical channel to a receiver;

reading said command information received via said second logical channel; and

executing said command information for controlling telephone line operations of said

2

97RSS327

PAGE 6/21 * RCVD AT 7/26/2004 9:00:42 PM [Eastern Daylight Time] * SVR:USPTO-EFXRF-1/1 * DNIS:8729306 * CSID:9492821002 * DURATION (mm-ss):05-40

modem, wherein said command information for controlling telephone line operations of said modem includes a command to call a telephone number or a command to answer an incoming call.

5. (previously presented) The method of claim 4 further comprising the step of transmitting a data block request message.

6. (previously presented) The method of claim 5 wherein said step of transmitting a data block request message comprises transmitting information indicating a maximum number of bytes of data that should be transmitted.

7. (previously presented) The method of claim 5 further comprising the step of variably allocating memory allocated to said first logical channel.

8. (previously presented) The method of claim 7 further comprising the step of implementing a system of credit allocation to control the maximum number of bytes of data transmitted.

9. (previously presented) The method of claim 8 wherein said step of implementing is carried out to optimize performance of said modem.

10. (previously presented) The method of claim 5 further comprising the steps of providing a memory space in said modem and allocating a portion of said memory space to each of said logical channels.

11. (previously presented) The method of claim 10 further comprising the step of tracking the memory allocated to each of said logical channels with a software credit counter .

3

97RSS327

PAGE 7/21 * RCVD AT 7/26/2004 9:00:42 PM [Eastern Daylight Time] * SVR:USPTO-EFXRF-1/1 * DNIS:8729306 * CSID:9492821002 * DURATION (mm-ss):05-40

12. (previously presented) The method of claim 11 further comprising the step of swapping memory allocated to each of said logical channels responsive to said data block request message.

13. (previously presented) The method of claim 11 further comprising the step of suspending data transfer if the memory allocated to a logical channel is insufficient to accommodate a requested data block.

14. (previously presented) The method of claim 4 further comprising transmitting a data transfer message.

15. (previously presented) The method of claim 14 wherein said step of transmitting a data transfer message further comprising transmitting information indicating the size of the data block transferred.

16. (previously presented) The modem of claim 1 further comprising an MCU coupled to said physical channel.

17. (previously presented) The modem of claim 16 wherein said MCU comprises a mailbox memory for storing said command information.

18. (previously presented) The modem of claim 16 wherein said MCU further comprising transfer registers for storing said data.

19. (previously presented) The modem of claim 16 further comprising a physical channel interface for transforming serial data from said source to parallel data at said MCU and parallel data from said MCU to serial data transmitted to said receiver.

20. (currently amended) A modem device capable of communicating information with a host via a host interface, said information including command information and data information,

4

97RSS327

PAGE 8/21 * RCVD AT 7/26/2004 9:00:42 PM [Eastern Daylight Time] * SVR:USPTO-EFXRF-1/1 * DNIS:8729306 * CSID:9492821002 * DURATION (mm-ss):05-40

said device comprising:

a controller in communication with said host interface for receiving said information from said host;

a physical channel interface including a data pump; and

a physical channel in communication with said controller and said physical channel interface, said physical channel including a logical command channel and a logical data channel;

wherein said controller provides said command information to said physical channel interface via said logical command channel and provides said data information to said physical channel interface via said logical data channel, and wherein said command information includes a command type defining said logical command channel, and said data information includes a data type defining said logical data channel, and wherein said command information controls telephone line operations of said modem and includes a command to call a telephone number or a command to answer an incoming call.

21. (previously presented) The device of claim 20, wherein said controller comprises:

a transmit buffer capable of buffering said information prior to providing said information to said physical channel interface; and

a mailbox for use in conjunction with said transmit buffer to distinguish between said command information and said data information in said transmit buffer;

wherein said transmit buffer and said mailbox are in communication with said host interface.

22. (previously presented) The device of claim 21, wherein said controller further comprises:

a receive buffer capable of receiving and buffering data from said physical channel interface via said physical channel.

23. (previously presented) The device of claim 21, wherein said mailbox comprises:

a receive register; and

a transmit register;

wherein said controller writes first data to said receive register and reads second data from transmit register, and wherein said host writes said second data to said transmit register and reads said first data from receive register.

24. (previously presented) The device of claim 23, wherein said first and second data indicate an information type.

25. (previously presented) The device of claim 24, wherein said information type includes a message information type, a command information type and a data information type.

26. (previously presented) The device of claim 23, wherein said first and second data indicate a logical channel type.

27. (previously presented) The device of claim 26, wherein said logical channel type includes a logical command channel type and logical data channel type.

28. (previously presented) The device of claim 20, wherein said host interface includes a plurality of bi-directional data line, a plurality of address lines, a plurality of control lines and a plurality of status lines.

29. (previously presented) The device of claim 20, wherein said controller comprises:

a transmit buffer capable of buffering said information prior to providing said information to said physical channel interface; and

6

a credit counter for use to control information flow from said host.

30. (previously presented) The device of claim 29, wherein said credit counter indicates a number of bytes that can be received from said host.

31. (currently amended) A modem device capable of communicating information with a host via a host interface, said information including command information and data information, said device comprising:

a controller in communication with said host interface for receiving said information from said host;

a plurality of physical channel interfaces, each of said plurality of physical channel interfaces including a data pump; and

a plurality of physical channels, wherein said controller is in communication with each of said physical channel interfaces via at least one of said plurality of physical channels, and wherein at least one of said plurality of physical channels includes a logical command channel and a logical data channel;

wherein said controller provides said command information to said at least one of said plurality of physical channel interfaces via said logical command channel and provides said data information to said at least one of said plurality of physical channel interfaces via said logical data channel, and wherein said command information includes a command type defining said logical command channel, and said data information includes a data type defining said logical data channel, and wherein said command information controls telephone line operations of said modem and includes a command to call a telephone number or a command to answer an incoming call.

7

32. (previously presented) The device of claim 31, wherein said controller comprises:

a transmit buffer capable of buffering said information prior to providing said information to one of said plurality of physical channel interfaces; and

a mailbox for use in conjunction with said transmit buffer to distinguish between said command information and said data information in said transmit buffer designate for each of said plurality of physical channel interfaces;

wherein said transmit buffer and said mailbox are in communication with said host interface.

33. (previously presented) The device of claim 32, wherein said controller further comprises:

a receive buffer capable of receiving and buffering data from said plurality of physical channel interfaces via said plurality of physical channels.

34. (previously presented) The device of claim 32, wherein said mailbox comprises:

a receive register; and

a transmit register;

wherein said controller writes first data to said receive register and reads second data from transmit register, and wherein said host writes said second data to said transmit register and reads said first data from receive register.

35. (previously presented) The device of claim 34, wherein said first and second data indicate an information type.

36. (previously presented) The device of claim 35, wherein said information type includes a message information type, a command information type and a data information type.

8

97RSS327

PAGE 12/21 * RCVD AT 7/26/2004 9:00:42 PM [Eastern Daylight Time] * SVR:USPTO-EFXRF-1/1 * DNIS:8729306 * CSID:9492821002 * DURATION (mm-ss):05-40

37. (previously presented) The device of claim 34, wherein said first and second data indicate a physical channel number and a logical channel type.

38. (previously presented) The device of claim 37, wherein said physical channel number indicates one of said plurality of physical channels and said logical channel type includes a logical command channel type and logical data channel type.

39. (previously presented) The device of claim 31, wherein said host interface includes a plurality of bi-directional data line, a plurality of address lines, a plurality of control lines and a plurality of status lines.

40. (previously presented) The device of claim 31, wherein said controller comprises:

a transmit buffer capable of buffering said information prior to providing said information to said plurality of physical channel interfaces; and

a credit counter for use to control information flow from said host.

41. (previously presented) The device of claim 40, wherein said credit counter indicates a number of bytes that can be received from said host.

42. (currently amended) A method of communicating information between a modem device and a host via a host interface, said device including a controller in communication with said host interface and a physical channel, wherein said physical channel is in communication with a physical channel interface having a data pump, and said information including command information and data information, said method comprising:

defining a logical command channel in said physical channel based on a command type;

defining a logical data channel in said physical channel based on a data type;

providing said command information, including said command type, to said physical

9

channel interface via said logical command channel, wherein said command information controls operations of said data pump and includes a command to call a telephone number or a command to answer an incoming call; and

providing said data information, including said data type, to said physical channel interface via said logical data channel.

43. (previously presented) The method of claim 42 further comprising:

buffering said information in transmit buffer prior to providing said information to said physical channel interface; and

distinguishing between said command information and said data information in said transmit buffer.

44. (previously presented) The method of claim 43 further comprising:

receiving data from said physical channel interface via said physical channel; and

buffering said data in a receive buffer.

45. (previously presented) The method of claim 43, wherein said distinguishing is performed using a mailbox, said mailbox comprises:

a receive register; and

a transmit register:

wherein said controller writes first data to said receive register and reads second data from transmit register, and wherein said host writes said second data to said transmit register and reads said first data from receive register.

46. (previously presented) The method of claim 45, wherein said first and second data indicate an information type.

10

47. (previously presented) The method of claim 46, wherein said information type includes a message information type, a command information type and a data information type.

48. (previously presented) The method of claim 47, wherein said first and second data indicate a logical channel type.

49. (previously presented) The method of claim 48, wherein said logical channel type includes a logical command channel type and logical data channel type.

50. (previously presented) The method of claim 42, wherein said host interface includes a plurality of bi-directional data line, a plurality of address lines, a plurality of control lines and a plurality of status lines.

51. (previously presented) The method of claim 42 further comprising:

buffering said information in a transmit buffer prior to providing said information to said physical channel interface; and

updating a credit counter for controlling information flow from said host.

52. (previously presented) The method of claim 51, wherein said credit counter indicates a number of bytes that can be received from said host.

53. (previously presented) The device of claim 20, wherein said physical channel further includes a logical message channel and said information further includes a message information, said controller provides said message information to said physical channel interface via said logical message channel, and wherein said message information includes a message type defining said logical message channel.

54. (previously presented) The method of claim 4 further comprising the steps of:

monitoring said data information for embedded command information; and

11

executing said embedded command information for controlling telephone line operations

of said modem.

12